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**REMARKS**

***Summary of the Amendment***

Upon entry of the above amendment, claims 1 and 47 will have been amended and claims 55-60 will have been added. Accordingly, claims 1-22 and 24-60 will be pending. Claims 24-46 and 48-51 stand withdrawn by the Examiner due to a restriction requirement. Claims 1, 47 and 52 are in independent form.

***Summary of the Official Action***

In the Office action, non-elected claims 24-46 and 48-51 were again withdrawn from examination by the Examiner. The Examiner also rejected elected claims 1-22, 47 and 52-54 over the applied art of record. By the present amendment and remarks, Applicant submits that the rejections have been overcome, and respectfully requests reconsideration of the outstanding Office Action and allowance of the present application.

***Interview of June 1, 2004***

Applicant appreciates the courtesy extended by Examiner Jimenez in the interview of June 1, 2004. In that interview, Applicant's representative discussed, among other things, that HOLROYD discloses a flatwork ironing roll for use in commercial laundries (see col. 1, lines 1-4) and does not relate to a roll for smoothing a web. It was also explained that

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ironing rolls are not used to smooth a web and that objects which are laundered and ironed cannot be properly characterized as a web. Finally, Applicant's representative explained that the roll disclosed in HOLROYD is designed to be "porous", i.e., it is pervious to steam or moisture. Accordingly, a porous roll cannot properly be characterized as a solid cylindrical mass because a solid cylindrical mass is not porous.

Applicant's representative also proposed amending the claims to recite that the covering layer contains no through-apertures in order to present the claims in allowable form. In this regard, Applicant's representative pointed out that HOLROYD discloses a covering in which an asbestos fabric is drawn through a liquid bath, so that through holes are preserved. As such, this document cannot anticipate claims reciting no through apertures, and that it would not have been obvious to modify HOLROYD in a manner contrary to its express disclosure, i.e., as this covering is intended for use in the pressing of cloth, the through holes are necessary for the proper operation of the roll.

Still further, it was pointed out that, while PAASONEN fails to disclose through holes, there is no teaching or suggestion that the thermoplastic utilized by HOLROYD would be able to form the covering required by PAASONEN. That is, HOLROYD only discloses the formation of a layer as an asbestos cloth is pulled through a bath so that the thermoplastic bath can attach to the asbestos fibers. Because PAASONEN shows no such cloth base, it cannot be determined whether the layer formed by HOLROYD would adequately form the

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layer intended by PAASONEN, such that it would not have been obvious to modify PAASONEN in the manner asserted by the Examiner.

Applicant also referred the Examiner to col. 5, lines 6-18 of HOLROYD which clearly indicates that the fabric covering layer is made to be pervious to steam and moisture. In contrast, the present invention, as seen for example in Fig. 1, is clearly directed to a roll covering layer that has a smooth outer surface and that has no through-apertures.

In response to these arguments, the Examiner agreed that HOLROYD is directed to a covering layer that is disclosed as being porous and/or pervious to moisture. The Examiner also agreed to reconsider the prior art rejections if the claims were amended to recite that the covering has no through-apertures.

Accordingly, in view of these comments, Applicant is herein amending independent claims 1 and 47 to recite that the covering layer contains no through-apertures in an effort to advance prosecution and obtain allowance of the pending claims.

***Traversal of Rejection Under 35 U.S.C. § 102(b)***

Applicant traverses the rejection of claims 1-8, 12, 13, 16-18, 20, 21 and 47 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 2,534,818 to HOLROYD et al.

The Examiner again asserted that this document discloses all the features recited in these claims including the thermoplastic and thermosetting plastic and the smooth outer

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surface. The Examiner also asserted that HOLROYD teaches a roll for smoothing a web. Applicant respectfully traverses this rejection and the Examiner's assertions.

As a preliminary matter, the Examiner essentially agreed to reconsider and withdraw this rejection based upon proposed amendments discussed during the interview and upon the filing of a response, i.e., that HOLROYD clearly lacks any disclosure or suggestion with regard to a covering layer having no through-apertures. Accordingly, Applicant submits that the above noted claims are allowable at least for this reason.

Furthermore, Applicant submits that HOLROYD fails to disclose the invention as defined by at least independent claims 1 and 47 as amended. Notwithstanding the Office Action assertions as to what HOLROYD discloses, Applicant submits that HOLROYD fails to disclose, inter alia, a roll having a covering layer comprising at least one thermosetting plastic and at least one thermoplastic, wherein *the covering layer contains no through-apertures and has a smooth outer surface and wherein the roll is a smoothing paper web roll*, as recited in amended claims 1 and 47.

In the Interview of June 1, 2004, Applicant's representative pointed out and the Examiner essentially acknowledged that HOLROYD teaches to make a roll from an asbestos fabric which is drawn through a liquid bath, wherein the liquid bath preserves the openings. It was also pointed out that the covering layer thus formed is rendered porous. Applicant's representative also emphasized, and the Examiner apparently agreed, that HOLROYD does

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not teach to make a roll which contains no through-apertures, and in fact, specifically teaches to form a roll with through-apertures.

Moreover, Applicant has consistently maintained that the roll cover of HOLROYD is designed to be “porous” with only the fabric yarns being coated with the resin. See text between col. 1, line 54 and col. 2, line 2. Indeed, the text of col. 5, lines 6-18 of HOLROYD clearly indicates that the fabric covering layer is made to be pervious to steam and moisture, and that “[t]he resinous treatment ... does not fill up the interstices of the fabric.” In contrast, the present invention is clearly directed to a roll covering layer that contains no through-apertures and has a smooth outer surface.

Finally, Applicant emphasizes that HOLROYD is directed to an ironer roll for laundries and not to a roll for smoothing a paper web. By way of background, Applicant notes that such ironer rolls generally have a diameter of about one foot and a length of about ten feet. On the other hand, rolls for smoothing a web of the type of Applicant’s invention typically have diameters of up to five feet and lengths of up to about 40 feet.

Again, by way of background, it is noteworthy that rolls of the type disclosed in HOLROYD are manufactured in an entirely different way than the rolls of the type disclosed in the instant specification (see e.g., paragraph [0011]). For example, HOLROYD explains that the roll is made by first treating a fabric with resin in a treating bath. The fabric is then passed through two squeeze rolls 20 after which the wet fabric passes through a tender-drier

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casing 21. The fabric leaves the casing 21 in a substantially dry and laterally stretched condition (see col. 4, lines 57-61). After the casing 21, the fabric passes between calender rolls 22 and finally passes through a curing chamber 23 where the thermosetting resin becomes cured in the presence of a catalyst. Only after passing the curing chamber 23 is the fabric placed onto a roll core.

Thus, Applicant submits that the above-noted claims are not disclosed, or even suggested, by any proper reading of HOLROYD.

Applicant further notes that, for an anticipation rejection under 35 U.S.C. § 102(b) to be proper, each element of the claim in question must be disclosed in a single document, and if the document relied upon does not do so, then the rejection must be withdrawn.

Because HOLROYD fails to disclose at least the above mentioned features as recited in independent claims 1 and 47, Applicant submits that HOLROYD does not disclose all the claimed features recited in at least independent claims 1 and 47.

Furthermore, Applicant submits that dependent claims 2-8, 12, 13, 16-18, 20 and 21 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicant submits that no proper reading of HOLROYD discloses or suggests, in combination: that the web is a paper web as recited in claim 2; that the roll core comprises a hard metal roll core as recited in claim 3; that the covering layer comprises a matrix

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material and wherein one of fillers and fibers are embedded in the matrix material as recited in claim 4; that the amount thermosetting plastic is, one of greater than and proportionally greater than, the amount of thermoplastic as recited in claim 5; that the proportion of thermosetting plastic is one of between approximately 50% and 80% as recited in claim 6; that the proportion is between approximately 60% and 75% as recited in claim 7; that the proportion is approximately 70% as recited in claim 8; that the covering layer comprises a mixture of the at least one thermosetting plastic and the at least one thermoplastic and wherein an amount of the thermosetting plastic relative to the amount of thermoplastic in the covering layer comprises a mixture ratio which is essentially constant over an axial length of the covering layer as recited in claim 12; that the covering layer comprises a mixture of the at least one thermosetting plastic and the at least one thermoplastic and wherein an amount of the thermosetting plastic relative to the amount of thermoplastic in the mixture comprises a mixture ratio which is essentially constant over a radial thickness of the covering layer as recited in claim 13; that the covering layer includes one of fillers and fibers as recited in claim 16; that the covering layer comprises a matrix material and wherein the fillers or fibers are disposed in the matrix material of the covering layer as recited in claim 17; that the covering layer includes fibers arranged in the form of one or more fiber layers as recited in claim 18; that the covering layer includes fibers and fillers as recited in claim 20; and that the fibers and fillers are encapsulated by the covering layer made of matrix material as recited

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in claim 21.

Applicant requests that the Examiner reconsider and withdraw the rejection of the above-noted claims under 35 U.S.C. § 102(b).

*Traversal of Rejections Under 35 U.S.C. § 103(a)*

*Over Holroyd alone*

Applicant respectfully traverses the rejection of claims 9-11, 14, 15, 19 and 22 under 35 U.S.C. § 103(a) as unpatentable over HOLROYD alone.

The Examiner asserted that HOLROYD fairly discloses all of the claimed features recited in these claims except for, among other things, using at least two different thermoplastics and at least two different thermosetting plastics, a radially varying mixture ratio, and the recited fibers and fillers. However, the Examiner opined that such features were an obvious matter of design choice. Applicant respectfully traverses this rejection.

Again, as a preliminary matter, the Examiner essentially agreed to reconsider and withdraw this rejection based upon the proposed amendments made during the interview and upon the filing of a response, i.e., that HOLROYD clearly lacks any disclosure or suggestion with regard to a covering layer which contains no through-apertures. Accordingly, Applicant submits that the above noted claims are allowable at least for this reason.

Furthermore, notwithstanding the Office Action assertions as to what HOLROYD



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discloses or suggests, Applicant submits that no proper reading of or modification of this document discloses or suggests, inter alia, a roll having a covering layer comprising at least one thermosetting plastic and at least one thermoplastic, wherein *the covering layer contains no through-apertures and has a smooth outer surface* and wherein the roll is a *smoothing paper web roll*, as recited in amended claim 1.

As explained above, the roll cover of HOLROYD is designed to be “porous” with only the fabric yarns being coated with the resin. See text between col. 1, line 54 and col. 2, line 2. Indeed, the text of col. 5, lines 6-18 of HOLROYD clearly indicates that the fabric covering layer is made to be pervious to steam and moisture, and that “[t]he resinous treatment ... does not fill up the interstices of the fabric.” In contrast, the present invention is clearly directed to a roll covering layer that *contains no through-apertures* and has a smooth outer surface.

Again, HOLROYD is merely directed to a covering layer that is disclosed as being porous and/or pervious to moisture. This document further discloses a roll cover with nonfilled interstices. Accordingly, it simply cannot be said that this document discloses or suggests a covering layer that contains no through-apertures and has a smooth outer surface, as recited in amended claim 1.

Finally, Applicant emphasizes that HOLROYD is directed to an ironer roll for laundries and not to a smoothing paper web roll.

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Thus, Applicant submits that the above-noted document fails to disclose or suggest the features recited in at least independent claim 1. Because no proper modification of HOLROYD discloses or suggests at least the above-noted features of the instant invention, Applicant submits that HOLROYD fails to render unpatentable the combination of features recited in at least independent claim 1.

Furthermore, Applicant submits that there is no motivation or rationale disclosed or suggested in the art to modify HOLROYD in the manner asserted by the Examiner. Nor does the Examiner's opinion provide a proper basis for these features or for the motivation to modify this document, in the manner suggested by the Examiner. Therefore, Applicant submits that the invention as recited in at least independent claim 1 is not rendered obvious by any reasonable inspection of these disclosures.

Applicant directs the Examiner's attention to the guidelines identified in M.P.E.P section 2141 which state that "[i]n determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the reference before him to make the proposed substitution, combination, or other modification." *In re Linter*, 458 F.2d 1013, 1016, 173 USPQ 560, 562 (CCPA 1972).

As this section clearly indicates, "[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is

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some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).”

Moreover, it has been legally established that “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) .... Although a prior art device ‘may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so.’ 916 F.2d at 682, 16 USPQ2d at 1432.). See also *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992) (flexible landscape edging device which is conformable to a ground surface of varying slope not suggested by combination of prior art references).”

Additionally, it has been held that “[a] statement that modifications of the prior art to meet the claimed invention would have been ‘well within the ordinary skill of the art at the time the claimed invention was made’ because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a prima facie case of obviousness without some objective reason to combine the teachings of the references. *Ex parte Levengood*, 28 USPQ2d 1300 (Bd. Pat. App. & Inter. 1993).”

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Furthermore, Applicant submits that dependent claims 9-11, 14, 15, 19 and 22 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicant submits that no proper reading of HOLROYD discloses or suggests, in combination: that the covering layer includes at least two different thermosetting plastics as recited in claim 9; that the covering layer includes at least two different thermoplastics as recited in claim 10; that the covering layer includes at least two different thermoplastics as recited in claim 11; that the covering layer comprises a mixture of the at least one thermosetting plastic and the at least one thermoplastic and wherein an amount of the thermosetting plastic relative to the amount of thermoplastic in the mixture comprises a mixture ratio which varies over a radial thickness of the covering layer as recited in claim 14; that the amount or proportion of thermoplastic relative to the amount of the thermosetting plastic increases radially outwardly in the covering layer as recited in claim 15; that the covering layer includes one of glass, carbon, and aramide fibers as recited in claim 19; and that the covering layer includes powdered fillers as recited in claim 22.

Accordingly, Applicant requests that the Examiner reconsider and withdraw the above-noted rejection under 35 U.S.C. § 103(a) and indicate that these claims are allowable over the applied art of record.

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Over Paasonen with Holroyd

Applicant respectfully traverses the rejection of claims 52-54 under 35 U.S.C. § 103(a) as unpatentable over US patent 6,409,645 to PAASONEN et al. in view of HOLROYD.

The Examiner asserted that PAASONEN fairly discloses all of the claimed features recited in these claims except for, among other things, the particulars of the thermoplastic and the thermosetting plastic. However, the Examiner asserted that such features were taught in HOLROYD and that it would have been obvious to make the covering layer of PAASONEN with the plastic materials of HOLROYD. Applicant respectfully traverses this rejection and the Examiner's assertions.

Again, as a preliminary matter, the Examiner essentially agreed to reconsider and withdraw this rejection based upon the proposed amendments made during the interview and upon the filing of a response, i.e., the Examiner essentially agreed that HOLROYD and PAASONEN lack any disclosure or suggestion with regard to a covering layer with the recited material properties and which contains no through-apertures, as recited in at least claim 52. Accordingly, Applicant submits that the above noted claims are allowable at least for this reason.

Furthermore, notwithstanding the Office Action assertions as to what PAASONEN and HOLROYD discloses or suggests, Applicant submits that no proper reading of or

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combination of these documents discloses or suggests, inter alia, a roll having a covering layer comprising *at least one thermosetting plastic and at least one thermoplastic*, wherein *the at least one thermoplastic has a melting temperature which is below a glass transition temperature of the at least one thermosetting plastic*, and wherein *the covering layer contains no through-apertures* and has a smooth outer surface, as recited in independent claim 52.

As acknowledged by the Examiner, PAASONEN is entirely silent with regard to a covering layer comprising *at least one thermosetting plastic and at least one thermoplastic*, much less, one which also *contains no through-apertures*.

Furthermore, as explained above, the roll cover of HOLROYD is designed to be “porous” with only the fabric yarns being coated with the resin. See text between col. 1, line 54 and col. 2, line 2. Indeed, the text of col. 5, lines 6-18 of HOLROYD clearly indicates that the fabric covering layer is made to be pervious to steam and moisture, and that “[t]he resinous treatment ... does not fill up the interstices of the fabric.” In contrast, the present invention is clearly directed to a roll covering layer that *contains no through-apertures* and has a smooth outer surface.

Again, HOLROYD is merely directed to a covering layer that is disclosed as being porous and/or pervious to moisture. This document further discloses a roll cover with nonfilled interstices. Accordingly, it simply cannot be said that this document discloses or suggests a covering layer that contains no through-apertures and has a smooth outer surface,

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as recited in amended claim 52.

Applicant notes that because HOLROYD specifically provides for a porous roll cover, it would not have been obvious to modify HOLROYD in a manner contrary to its express disclosure, i.e., as this covering is intended for use in the pressing of cloth, the through holes are necessary for the proper operation of the roll.

Still further, Applicant submits that while PAASONEN fails to disclose through holes, there is no teaching or suggestion that the thermoplastic utilized by HOLROYD would be able to form the covering required by PAASONEN. HOLROYD only discloses the formation of a layer as an asbestos cloth is pulled through a bath so that the thermoplastic bath can attach to the asbestos fibers. As PAASONEN shows no such cloth base, it cannot be determined whether the layer formed by HOLROYD would adequately form the layer intended by PAASONEN. Thus, a fair reading of these document suggests that it would not have been obvious to modify PAASONEN in the manner asserted by the Examiner.

Accordingly, Applicant submits that the above-noted documents fail to disclose or suggest the features recited in at least independent claim 52. Because no proper combination of PAASONEN and HOLROYD discloses or suggests at least the above-noted features of the instant invention, Applicant submits that each of PAASONEN and HOLROYD fails to render unpatentable the combination of features recited in at least independent claim 52.

Furthermore, Applicant submits that there is no motivation or rationale disclosed or

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suggested in the art to modify PAASONEN and HOLROYD in the manner asserted by the Examiner. Nor does the Examiner's opinion provide a proper basis for these features or for the motivation to modify and/or combine these documents, in the manner suggested by the Examiner. Therefore, Applicant submits that the invention as recited in at least independent claim 52 is not rendered obvious by any reasonable inspection of these disclosures.

Furthermore, Applicant submits that dependent claims 53 and 54 are allowable at least for the reason that these claims depend from allowable base claims and because these claims recite additional features that further define the present invention. In particular, Applicant submits that no proper reading of PAASONEN and HOLROYD discloses or suggests, in combination: that the roll is a smoothing paper web roll as recited in claim 53; and that the covering layer is a solid cylindrical mass as recited in claim 54.

Accordingly, Applicant requests that the Examiner reconsider and withdraw the above-noted rejection under 35 U.S.C. § 103(a) and indicate that these claims are allowable over the applied art of record.

***Rejoinder of non-elected claims***

Applicant submits that if claims 1, 47 and 52 are found to be allowed, as possibly suggested by the Examiner in the Interview of June 1, 2004, the restriction requirement with respect to claims 24-46 and 48-51 would now be improper and should be withdrawn, i.e.,



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claims 24-46 and 48-51 have been previously amended to depend from claims 1 and 47 and should therefore be rejoined. Moreover, as new claims 55-60 depend from claims 1, 47 and 52, they should also be examined and allowed.

Applicant refers the Examiner to MPEP 821.04 which states “if applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims which depend from or otherwise include all the limitations of the allowable product claim will be rejoined” (emphasis added). Indeed, this section specifically explains that “[p]rocess claims which depend from or otherwise include all the limitations of the patentable product will be entered as a matter of right if the amendment is presented prior to final rejection or allowance.”

As the instant Amendment is being made prior to a final rejection and allowance, Applicant respectfully requests entry and allowance of previously withdrawn claims 24-46 and 48-51, and also allowance of new claims 55-60, if and when claims 1-22 and 47 are found allowable.

*New Claims are also Allowable*

Applicant submits that the new claims 55-60 are allowable over the applied art of record. Specifically, claims 55-60 depend from claims 1, 47 and 52, which are now believed to be allowable, and recite a combination of features which are clearly not disclosed or

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suggested by the applied art of record.

Accordingly, Applicant respectfully requests consideration of these claims and further request that the above-noted claims be indicated as being allowable.

### CONCLUSION

Applicant respectfully submits that each and every pending claim of the present invention meets the requirements for patentability under 35 U.S.C. § § 112, 102 and 103 and respectfully requests the Examiner to indicate allowance of each and every pending claim of the present invention.

In view of the foregoing, it is submitted that none of the references of record, either taken alone or in any proper combination thereof, anticipate or render obvious the Applicant's invention, as recited in each of the pending claims. The applied references of record have been discussed and distinguished, while significant claimed features of the present invention have been pointed out.

Further, any amendments to the claims which have been made in this response and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

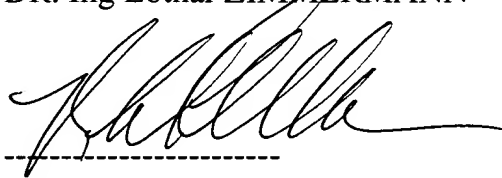
The Commissioner is hereby authorized to charge any fees necessary for consideration

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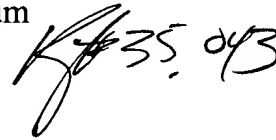
of this amendment to deposit account No. 19-0089.

While Applicant believes that the instant Amendment renders the application allowable in view of the protracted prosecution of this case, should the Examiner conclude that any other changes are necessary, the Examiner is invited to contact the undersigned attorney at the number listed below.

Respectfully submitted,  
DR. Ing Lothar ZIMMERMANN

A handwritten signature in black ink, appearing to read 'Neil F. Greenblum', written over a dashed horizontal line.

Neil F. Greenblum  
Reg. No. 28,394

Handwritten initials 'KF' followed by the number '35.043' in black ink.

June 8, 2004  
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